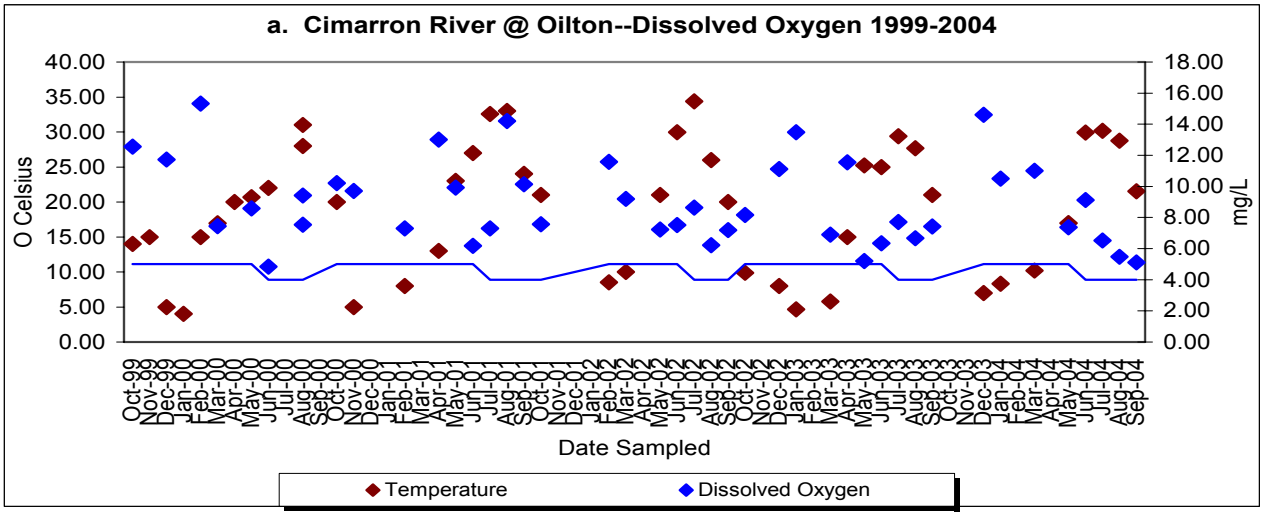
Cimarron River near Oilton

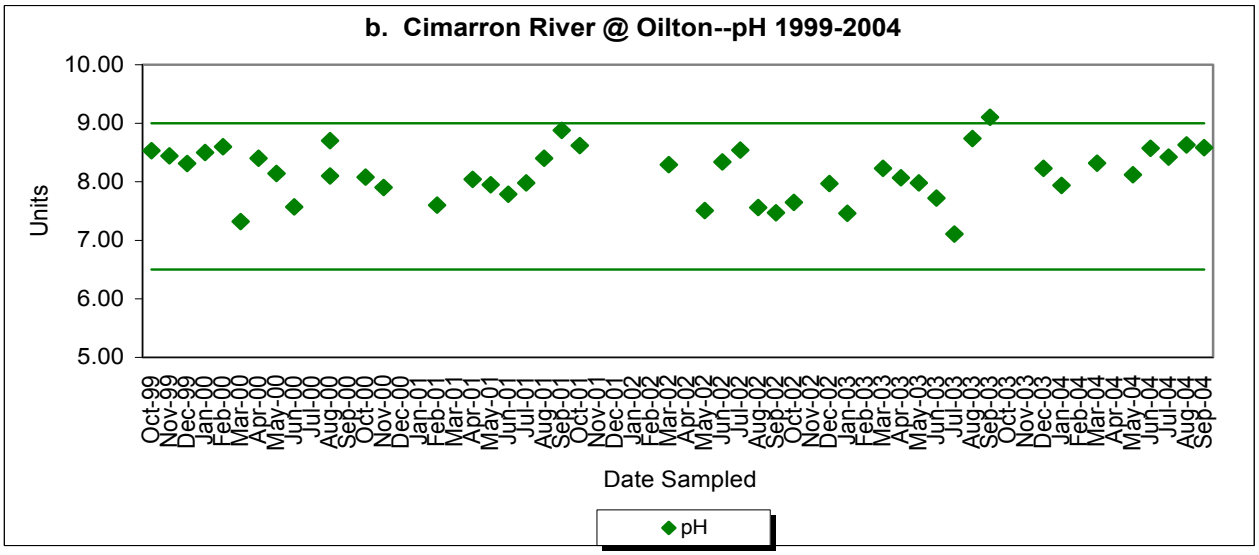
Station AT161500 (620900010170-001AT) is a permanent ambient trend monitoring station near the terminal end of the Cimarron River in Oklahoma. Situated in the northwestern portion of Creek County, the site was established north of the town of Oilton on State Highway 99. The station is positioned near the midpoint of stream segment 620900010170 and is classified within the Lower Cimarron River 8-digit HUC watershed (11050003). Water enters the stream system from several tributaries including Salt Creek, Skull Creek, Euchee Creek, and Tiger Creek, among others.

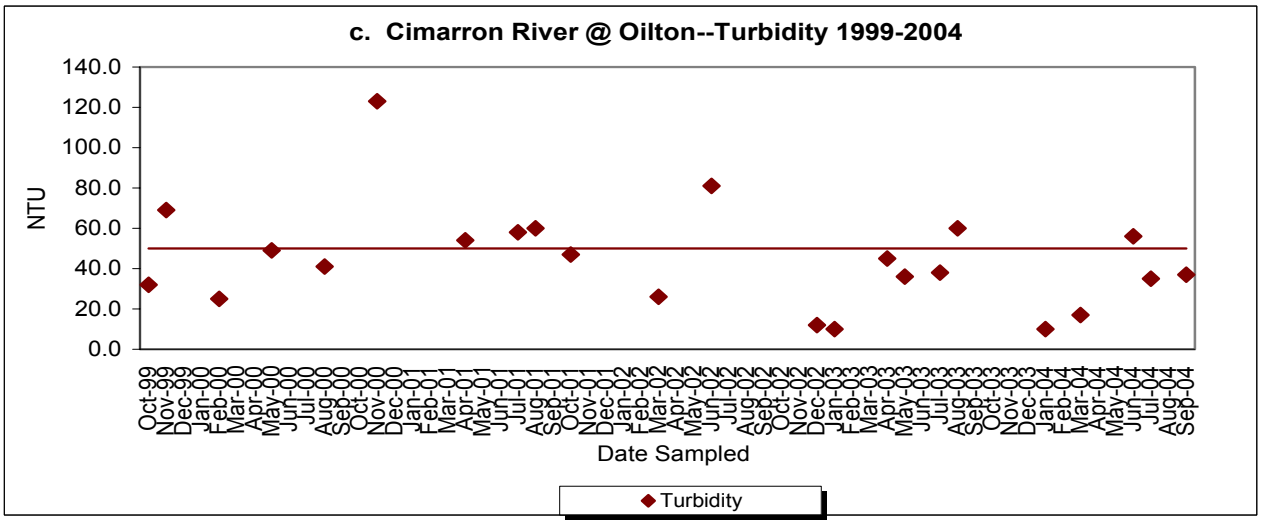
This station on the Cimarron River has been active for all water quality variables since November of 1998. The following assessment of beneficial uses is based on data collected from October of 1999 through September of 2004. For purposes of reporting, this station is representative of the Cimarron River from the confluence of Salt Creek (96.7212, 36.0928) downstream to confluence of the Cimarron River with Keystone Reservoir (96.4829, 36.1160). As per Oklahoma Water Quality Standards, Appendix A, Table 6 of Oklahoma Administrative Code (OAC) 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Emergency Water Supply (PPWS), 2) Warm Water Aquatic Community—Fish and Wildlife Propagation (WWAC), 3) Agriculture—Class III Irrigation (AG), and 4) Primary Body Contact—Recreation (PBCR).

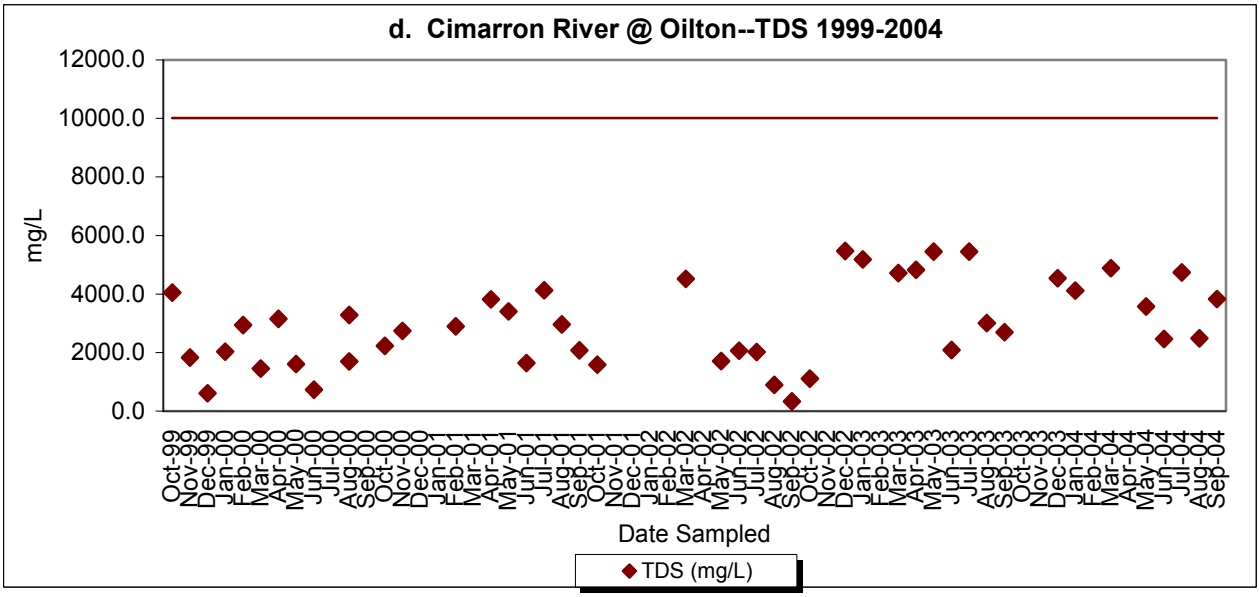
The WWAC beneficial use is not supported. Of the twenty-four (24) turbidity samples (Figure 8c), eight (8) samples (or 33%) exceeded the numerical criteria of 50. Dissolved oxygen (Figure 8a), pH (Figure 8b), and toxicant samples (Table 10) met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates (Figure 8d and Figure 8e). The PBCR beneficial use is not supported (Table 11). Of the 24 fecal coliform concentrations, 8 samples (or 33%) exceeded the prescribed screening level of 400 cfu/mL. Of the 24 enterococci concentrations, seven (7) samples exceeded the prescribed screening level of 400 cfu/mL, and the geometric mean (127.8 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Cimarron River is not nutrient-threatened. The total phosphorus and nitrate/nitrite median values were below the threshold medians of 1.0 mg/L and 4.65 mg/L, respectively (Figure 8f).

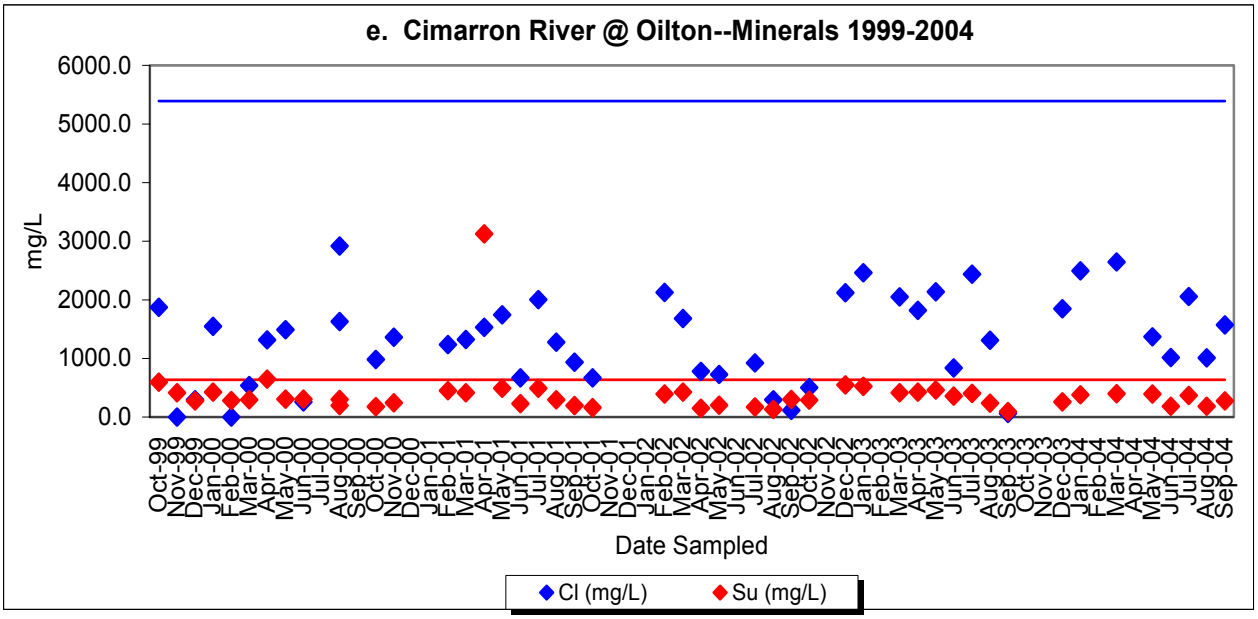
Figure 8a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) for the Cimarron River at Oilton (AT161500), 1999-2004.








d. Cimarron River @ Oilton--TDS 1999-2004
12000.0
10000.0
8000.0
6000.0
4000.0
2000.0
0.0
mg/L
Oct-99
Nov-99
Dec-99
Jan-00
Feb-00
Mar-00
Apr-00
May-00
Jun-00
Jul-00
Aug-00
Sep-00
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01
Nov-01
Dec-01
Jan-02
Feb-02
Mar-02
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02
Nov-02
Dec-02
Jan-03
Feb-03
Mar-03
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03
Oct-03
Nov-03
Dec-03
Jan-04
Feb-04
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Date Sampled
TDS (mg/L)


e. Cimarron River @ Oilton--Minerals 1999-2004
6000.0
5000.0
4000.0
3000.0
2000.0
1000.0
0.0
mg/L
Oct-99
Nov-99
Dec-99
Jan-00
Feb-00
Mar-00
Apr-00
May-00
Jun-00
Jul-00
Aug-00
Sep-00
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
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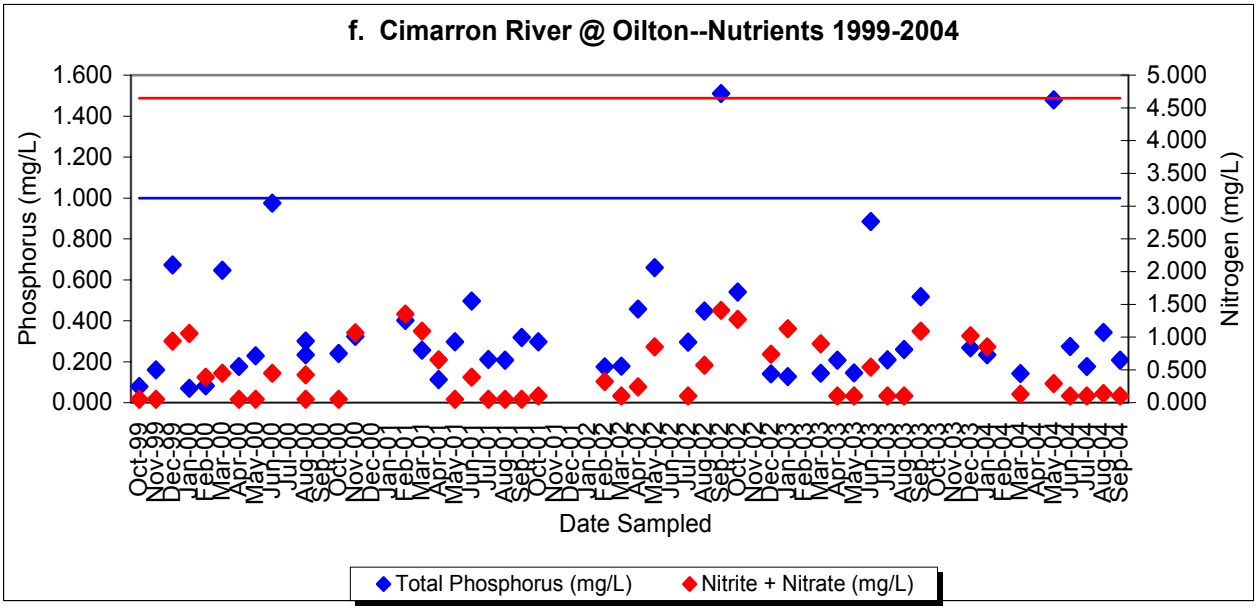
Jan-04
Feb-04
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Date Sampled
Cl (mg/L)
Su (mg/L)


f. Cimarron River @ Oilton--Nutrients 1999-2004
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
Phosphorus (mg/L)
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Nitrogen (mg/L)
Oct-99
Nov-99
Dec-99
Jan-00
Feb-00
Mar-00
Apr-00
May-00
Jun-00
Jul-00
Aug-00
Sep-00
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
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Oct-03
Nov-03
Dec-03
Jan-04
Feb-04
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Date Sampled
Total Phosphorus (mg/L)
Nitrite + Nitrate (mg/L)